



Exercise Sheet I: Introduction (until Thursday 25.10.2012)

Please note that you need **50%** of all exercise points to receive the “Studienleistung”. Exercises have to be turned in until **Thursday** of each respective week and must be completed in teams of two students each. You may hand in your solutions either on paper **before the lecture** or into the mailbox at the IFIS floor (Mühlenpfordtstraße 23, 2nd floor). Please do not forget to write your “Matrikelnummer” and your tutorial group number on your solutions. Your solutions may be in German or English. Please note: To pass the “RDB I Modul” you need both the exercise points and the exam!

Exercise 1.1 – HMS (5 points)

Please log in to our Homework Management System (HMS) at

<https://www.ifis.cs.tu-bs.de:8443/hms>

using your y-number and password, and **sign in for this lecture**. This will make grading and managing your homework submissions a lot easier, both for you and us!

Exercise 1.2 – Basics (8 points)

- a) What is a database? (2 points)
- b) What is a database management system (DBMS)? (2 points)
- c) Briefly explain the differences between a DBMS and a file system. (2 points)
- d) Give an example of a scenario, where a database management system might be useful and briefly explain why you think it might be useful here. (2 points)

Exercise 1.3 – Redundancy (4 points)

- a) What is redundancy? (1 points)
- b) What are the two main disadvantages of uncontrolled redundancy? (2 points)
- b) What is a possible advantage of controlled redundancy? (1 point)

Exercise 1.4 (6 points)

Briefly define the following terms:

- a) View (2 points)
- b) Transaction (2 points)
- c) Declarative Querying (2 points)